DIGITAL LIQUID CRYSTAL DISPLAY DRIVING CIRCUIT

ABSTRACT OF THE DISCLOSURE

A digital liquid crystal display (LCD) driving circuit is provided for driving an LCD to display video images. The LCD driving circuit comprises a digital gamma-

5   correction and inversion circuit for performing a digital gamma-correction process on the digitized video signal and then performing a polarity inversion process on selected lines of the video signal. The digital gamma-correction and inversion circuit is coupled directly to a display memory unit so as to fetch the digitized video signal directly from the display memory unit. A digital-to-analog conversion means is coupled to the digital

10 gamma-correction and inversion circuit for converting the digital output of the digital gamma-correction and inversion circuit into analog form. Further, the LCD driving cir- cuit comprises an LCD timing control circuit, which is coupled to receive a plurality of video control signals associated with the digitized video signal, for converting the video control signals into an LCD timing control signal to control the LCD to display the

15 video signal. Still further, the LCD driving circuit comprises a PWM and shutdown cir- cuit for supplying power to the LCD and shutting down the LCD when the LCD has been idle for a preset period. Most of the constituent circuit components of the LCD driving circuit can be implemented in a single LSI integrated circuit. The LCD driving circuit is therefore compact in size, low in manufacturing cost, and low in power con-

20 sumption.

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